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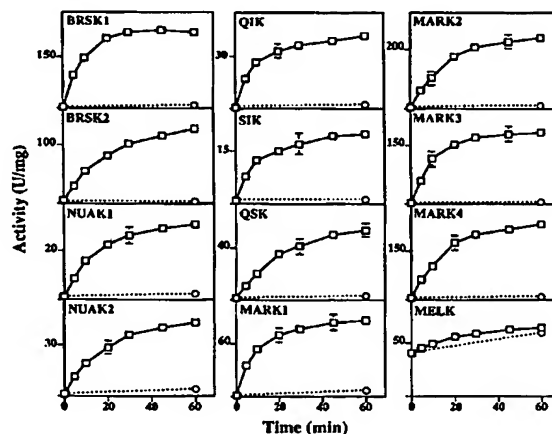
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- (71) Applicant (for all designated States except US): **UNIVERSITY OF DUNDEE [GB/GB]**; 11 Perth Road, Dundee DD1 4HN (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **HARDIE, David, Grahame [GB/GB]**; 3 Beechwood Terrace East, Newport on Tay, Fife DD6 8JG (GB). **ALESSI, Dario [GB/GB]**; 309 Perth Road, Dundee DD2 1LG (GB). **BOUDEAU, Jerome [FR/GB]**; 6 Bellfield avenue, 1st flat right, Dundee DD1 4NQ (GB).
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(54) Title: **METHODS**



(57) Abstract: A method for identifying a compound for use in modulating, for example promoting, the activation or phosphorylation of AMPK (AMP-activated protein kinase) or AMPK subfamily member in a cell, the method comprising the steps of (1) determining whether a test compound modulates, for example promotes, the protein kinase activity of LKB1 and (2) selecting a compound which modulates, for example promotes, the protein kinase activity of LKB1. The protein kinase activity may be tested using AMPK or an AMPK subfamily member, or a peptide encompassing the T-loop region of AMPK or an AMPK subfamily member. The LKB1 may be in a preparation or complex with STRAD and/or M025, which has much greater kinase activity than LKB1 in the absence of these accessory proteins. The LKB1, STRAD or M025 may be recombinant. The AMPK subfamily member may be AMPK α 1, AMPK α 2, NUAK1, NUAK2, BRSK1, BRSK2, SIK, QIK, QSK, MARK1, MARK2, MARK3, MARK4 or MELK.

WO 2005/010174 A2

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